

## SUBSTITUTE SPECIFICATION

### BACKGROUND AND SUMMARY

**[0001]** The present disclosure relates to a separator having a vertical axis of rotation and a drum with solids discharge openings in a single-cone or double-cone centrifugal space. The separator also includes a disk stack of super-imposed conical disks. The discs have bores forming at least one channel in the disk stack. The separator includes a distributor having a shaft concentrically surrounding a drum axis and a lower base section which expands radially. In the lower base section, one or more distributor channels are distributed in the form of bores.

**[0002]** It has been known for a long time to arrange disc stacks consisting of a plurality of discs situated axially above one another in the direction of the disc axis concentrically to the machine or drum axis in centrifugal drums of separators. This is known from the field of separators with drums with a vertical axis of rotation and solids discharge openings in a pulp space outside the disc stack.

**[0003]** In the case of separators with a vertical axis of rotation, a feeding of the product into the centrifugal drum takes place along the drum axis through a feeding pipe and radial distributor channels connected behind the feeding pipe. The product enters the centrifugal drum into the disc stack consisting of separating discs which are generally situated closely above one another but are nevertheless spaced relative to one another in the area of the essential disc surfaces and, as a rule, are conical. At the discs, heavier solids generally accumulate on the bottom side and move to the outer circumference of the disc stack, while the liquid flows toward the interior, in, for example, a two-phase liquid-solid separation.

**[0004]** For the implementation of a liquid-liquid-solid separation, that is, a three phase liquid-solid separation, it is also known to provide the disc stack with so-called rising